5800

Public Works (1898) Department.

G.O., No. 586 / 587 J

DATED 29 July 98

R Sent 14/7/98

[Despatch Abstract.]

Periyar Project. Estimates aggregating Rs 21410, connected with the Periyar Distribution, Sanctioned, with remark in copy of the Gro ordered to be forwarded to the Govt of India

Periyar Project. Forwarding Copy of Gro: Sanctioning, with remark, Estimates aggregating Rs 21410, connected with the Periyar Distribution.

(PSD)

Indexed.

P. W. D.

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

IRRIGATION.

Government (1898) of Madras.

PUBLIC WORKS.

Recd.	1898.	*Enclosures*
Regd.		*Spare copies*

G.O., Nos. 586. 587 I., 29th July 1898.

JULY.

Periyar Project

Forwarding copy of Proceedings sanctioning, with remark, estimates aggregating Rs. 21,410, connected with the Periyár distribution.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.

READ—the following papers:—

From Lieut.-Col. O. V. BODDY, R.E., Superintending Engineer, VI Circle, to the Chief Engineer for Irrigation, dated Kodaikánal, 5th May 1898, No. 657 M.D.

I have the honour to forward, for your approval and sanction, an estimate amounting to Rs. 8,750 * for excavating the tail end of Pappagudi offtake branching from the 9th branch channel, and constructing the necessary masonry works in the same.

* Increased to Rs. 8,790 in the office of the Chief Engineer for Irrigation owing to provision having been made for revetting the slopes of the channel at the pipe culvert.

2. The offtake at present ends in an inam tank, and in order to supply Government lands without the intervention of inam tanks, the extension now estimated for is proposed. For purposes of irrigation ten pipe sluices of 6 inches diameter, two of 9 inches diameter and two masonry sluices having vents of $1\frac{1}{2}$ feet square, are provided.

3. The two 12-inch culverts are proposed to prevent the banks from becoming water-logged and the lands from being kept under submergence. The quantity of drainage to be disposed of is very small.

4. Five byewashes which are spaced over a length of $1\frac{1}{2}$ miles are designed to carry the drainage of $\frac{1}{4}$ of a square mile which is considered a sufficient provision.

5. A considerable portion of the channel (*vide* longitudinal section) is in heavy embankment, but this is quite unavoidable.

6. Where the line of channel crosses the road or cart-tracks, the banks will be sloped with a gradient of 1 in 5, and bridges are not considered to be necessary. The mileages of all these works are shown in the accompanying tabular statement which shows hydraulic information in addition.

7. The work is classed as remunerative, and the expected return on the whole ayacut, which is 1,500 acres, is estimated to Rs. 7,500 at Rs. 5 per acre.

8. The Executive Engineer reports that the quarries are near the line and the rates provided are therefore sufficient.

9. The estimate is recommended for sanction.

ENCLOSURES.

REPORT to accompany the estimate for excavating the tail end of Pappagudi offtake and constructing masonry works in the same.

	RS.
Amount of estimate	8,790

AYACUT, 1,500 ACRES.

Tanks commanded and to be maintained.

1. Elamanur Peria Kommoyi No. 213.
2. Kolikudi Peria Kommoyi No. 203.
3. Pattappansiyur Kommoyi No. 212.
4. Elampallam tank (not in Government Order as it was then thought it could not be easily commanded).

Tanks to be abandoned.

1. Ponnangulam (not in Government Order).
2. Elamanur Pudu Kommoyi No. 214.
3. Kolikudi Pudu Kommoyi No. 209.
4. Andi odaikulam No. 210.
5. Achangulam } not in Government Order.
6. Kurunjapallam Kommoyi. } not in Government Order.
7. Sattamuttu. } not in Government Order.

Length of channel, 4 miles 3,380 feet.
Length maintained, 3 miles 4,260 feet.

Pappagudi offtake at present ends in an inam tank (Poolangulam tank) and consequently the Government tanks lower down could not be supplied with Periyár water except through a group of inam tanks.

It is therefore proposed to continue the tail end of the offtake along the line shown in the accompanying survey plan and construct the necessary masonry works for irrigating the Government dry lands and the mamool wet lands.

This channel will be maintained up to 201st chain.

The work will be carried out in accordance with the standard specification current in the department.

23rd March 1898.

(Signed) T. W. S. SMYTH,
Ex. Engineer, Special Periyár Works.

Estimate Form—Abstract—Classified.

Sub-head.	Names of works.	Amount of estimate for individual work.	Total of sub-heads.	Total for each canal or distributary.	Total of each main head.
1	2	3	4	5	6
	CAPITAL EXPENDITURE NOT CHARGED TO REVENUE.	RS.	RS.	RS.	RS.
	49. IRRIGATION WORKS.				
	Periyár Project.				
	Open Capital Account.				
	3. Distributaries.				
	9th Branch Channel.				
	'Remunerative Work.				
	Excavating the tail end of Pappagudi offtake and constructing masonry works in the same.				
2. Land ..	1. Compensation for land	829	829		
3. Works ..	2. Drop of 4 feet at 0/1100	400			
	3. Do. at 1/220	400			
	4. Drop of 6 feet at 1/620	480			
	5. Two 12-inch pipe culverts at 0/2100 and 0/3700, each Rs. 100	240			
	6. Three 10-ft. cross drainage weirs, each Rs. 80 ..	240			
	7. Two 20-ft. cross drainage weirs, Rs. 115 each ..	230			
	8. Two masonry sluices 1½' × 1½', Rs. 95 each ..	190			
	9. Two 9-inch pipe sluices, Rs. 70 each	140			
	10. Ten 6-inch pipe sluices, Rs. 45 each	450			
	11. Two feet tail drop	140	2,910		
4. Earthwork ..	12. Excavating tail channel and distributaries ..	4,989	4,989		
5. Miscellaneous.	13. Demarcation stones	62	62		
	Total I. Works	..	..	8,790	
	II. Establishment ..	..	..	1,831	
	III. Tools and plant ..	..	..	9	
	Total Estimate ..	..	..	..	10,630

5th May 1898.

(Signed) O. V. BODDY, Lieut.-Col., R.E.,
Supg. Engineer, VI Circle.

From Lieut.-Col. O. V. BODDY, R.E., Superintending Engineer, VI Circle, to the Chief Engineer for Irrigation, dated Kodaikánal, 13th May 1898, No. 696 M.D.

I have the honour to forward, for your approval and sanction, a revised estimate amounting to Rs. 3,840 for excavating distributary and field channels from the left sluice above drop No. 14 in the 9th Branch channel.

2. The estimate is submitted in supersession of that for Rs. 3,090 sanctioned in G.O., No. 572 I., dated 23rd June 1897, and the excess amount now requiring sanction is Rs. 750. The necessity for the estimate is explained in the report attached to the estimate. It is reported that Government waste lands to the extent of 41 acres lying between 6th and 8th furlongs cannot be irrigated under the existing arrangement. It is therefore proposed to raise the water level sufficiently by the introduction of a 2 feet drop in the 6th furlong making the bed level of the reach above this drop level. The channel below this drop will remain as originally designed, that is, with a fall of 1 in 1,000. At the tail end another 2 feet drop is now proposed. To make provision for these additional works the original estimate has been revised, and for the reasons given in the report, the Executive Engineer's proposal is approved and the estimate recommended for sanction.

ENCLOSURES.

No. 143 E.

REPORT to accompany the Revised Estimate for excavating Distributary and Field Channels from the Left Sluice of Drop No. 14, 9th Branch Channel.

	RS.
Amount of revised estimate	3,840
„ of original estimate	3,090
Excess ...	750

The revised estimate provides for building a 2-feet drop at the 6th furlong and raising the banks for a length of 2 furlongs above.

The lands between the 6th and 8th furlong were Government waste lands now sold, and it is found impossible to irrigate them under existing conditions.

The area not at present commanded is 41 acres and was sold for over Rs. 100 per acre, the total area of 218 acres bringing Rs. 24,537.

The income to be derived from the interest on this sum and water-tax will be nearly Rs. 500. So the extra work is well worth doing.

A 2-feet tail drop of the same design is also provided.

15th March 1898.

(Signed) T. W. S. SMYTH,
Ex. Engr., Spl. Periyár Works.

Estimate Form—Abstract—Classified.

Sub-head.	Names of Works.	Amount of estimate for individual work.	Total of sub-heads.	Total for each canal or distributary.	Total of each main head.
1	2	3	4	5	6
	CAPITAL EXPENDITURE NOT CHARGED TO REVENUE.	RS.	RS.	RS.	RS.
	49. IRRIGATION.				
	Periyár Project.				
	Open Capital Account.				
	3. Distributaries.				
	9th Branch Channel.				
	Remunerative Works.				
	Excavating Distributary and Field Channels from Left Sluice above Drop No. 14.				
	Revised Estimate.				
2. Land ..	1. Compensation for land	138	138		
3. Works ..	2. Constructing 9-inch pipe sluice at 300 feet ..	90			
	3. Do. do. at 2,280 feet ..	50			
	4. Do. 3-ft. drop at 2,300 feet	150			
	5. Do. Melur road culvert at 2,500 feet ..	370			
	6. Do. two masonry sluices at 2,000 feet and 5,300 feet, each 56 rupees ..	112			
	7. Do. four 6-inch earthenware pipe sluices.	120			
	8. Do. 6-ft. drop at 5,300 feet ..	390			
	9. Do. two 2-ft. drops at 4,000 feet and tail end, each Rs. 110	220	1,502		
4. Earthwork ..	10. Earthwork cutting distributary	2,180	2,180		
5. Miscellaneous.	11. Demarcation stones	20	20		
	Total, I. Works	..	..	3,840	
	II. Establishment ..	..	..	851	
	III. Tools and plant ..	..	..	9	
	Total Estimate ..	..	..	..	4,700

(Signed) O. V. BODDY, Lieut.-Col., R.E.,
Suptg. Engineer, VI Circle.

13th May 1898.

From Lieutenant-Colonel O. V. BODDY, R.E., Superintending Engineer, VI Circle, to the Chief Engineer for Irrigation, dated Kodaikánal, 18th May 1898, No. 720 M.D.

I have the honour to forward, for your approval and sanction, an estimate, amounting to Rs. 8,770,* for excavating XI and XI A Distributary of 12th Branch channel and constructing the necessary masonry works.

* Increased to Rs. 8,780 in the office of the Chief Engineer for Irrigation, owing to provision having been made for raising the side walls of the tail drops by 6 inches.

2. The head sluice is situated at the 10th mile of the 12th Branch channel. The length of the distributary channels is 4 miles and 4,180 feet, of which 3 miles and 2,560 feet will be maintained by Government.

3. A survey showing the course of these distributaries accompanies the estimate; also a statement to indicate the position of the masonry works and in which the hydraulic details of these channels are given.

4. The area to be commanded by the channels is 1,500 acres and the increase of revenue expected is roughly Rs. 7,500 at Rs. 5 an acre. The works are classed as remunerative and the probable date of completion of the works will be 31st March 1899.

5. The rates have been revised by the Executive Engineer and are considered fair; the estimate is recommended for sanction.

Enclosures.

Report to accompany the estimate for excavating XI and XI A Distributary, 12th Branch Channel.

	RS.
Amount of estimate	8,780

The channel takes off at 10 miles of the 12th Branch channel and is intended to irrigate about 1,500 acres besides filling in the tanks, Sattan Endal, Siliandaikudi Kommoyi and Arangudi Endal proposed to be maintained.

At 139th chain, where the distributary bifurcates, there will be a dividing dam to regulate the water. One of these is XI A Distributary irrigating 600 acres. Part of the banking of this branch distributary will be formed from the spoil earth available from the side drainage channel (*vide* survey plan accompanying) to pass the drains of Sinnapanian Endal through which it runs.

Necessary drops and sluices are provided in the estimate. The works will be carried out in accordance with the standard specification current in the department.

2nd November 1897.

(Signed) A. JOYCE,
Ex. Engineer, Special Periyár Works.

Estimate Form.—Abstract—Classified.

Sub-head.	Names of works.	Amount of estimate for individual work.	Total of sub-heads.	Total for each canal or distributary.	Total of each main head.
1	2	3	4	5	6
	CAPITAL EXPENDITURE NOT CHARGED TO REVENUE.	RS.	RS.	RS.	RS.
	49. Irrigation Works.				
	Periyár Project.				
	Open Capital Account.				
	3. Distributaries.				
	XI. Distributary at 10th mile, XII Branch Channel.				
	Remunerative Work.				
	Excavating XI and XI-A Distributary from 10th mile, 12th Branch Channel.				
2. Land ..	1. Compensation for land	677	677		
3. Works ..	2. Head sluice XI distributary at 10th mile, 12th branch channel	380			
	3. Five 6-ft. falls in the XI distributary, each Rs. 470.	2,350			
	4. One 6-ft. fall, small, in the XI-A distributary ..	435			
	5. Two tail drops, each Rs. 70	140			
	6. Dividing dam at 139 chain, XI distributary ..	200			
	7. Twelve 6-inch pipe sluices in 11 and 11-A distributaries, each Rs. 55	660			
	8. Two 9-inch pipe sluices in the XI distributary, each Rs. 75	150	4,315		
4. Earthwork ..	9. Excavating 11 and 11-A distributaries	3,746	3,746		
5. Miscellaneous.	10. Demarcation stones	42	42		
	Total, I. Works	..	..	8,780	
	II. Establishment ..	..	..	1,864	
	III. Tools and plant ..	..	..	6	
	Total Estimate ..	..	..	..	10,650

18th May 1898.

(Signed) O. V. BODDY, Lt.-Col., R.E.,
Supg. Engineer, VI Circle.

No. 192 I.

Note by the Chief Engineer for Irrigation.

The marginally-noted estimates connected with the Periyár distribution are submitted for sanction.

	RS.
(1) *Ninth branch channel.*—Revised estimate for distributary from left sluice above drop No. 14 ...	3,840
(2) *Ninth branch channel.*—Extending Pappagudi offtake	8,790
(3) *Twelfth branch channel.*—Excavating distributaries XI and XI-A.	8,780

2. Of the area under the first of these works, 218 acres of Government waste were sold for Rs. 24,537. It was subsequently found that 41 acres, which were sold for over Rs. 100 an acre, are not at present commanded, and in order to command this land it is proposed to re-grade the channel from 2,200 feet where there is a 3-feet drop to 4,000 feet where a 2-feet drop is to be constructed. This will necessitate raising the bank in this length. The bed will by degrees adjust itself to the altered surface fall. Another small drop is proposed at the tail end of the channel. The excess over the estimate sanctioned in G.O., No. 572 I., dated 23rd June 1897, will be Rs. 750.

3. The second estimate is for carrying the Pappagudi offtake of the 9th branch channel round a group of inam tanks and extending it to supply 1,500 acres (including present wet) of Government land. This land cannot now be irrigated until water has filled and surplused from the inam tanks. The channel will unfortunately be very expensive, nearly Rs. 6 per acre irrigated.

4. The last estimate is for distributaries from the 12th branch channel to supply 1,500 acres. Apparently much of this area is already irrigated from over twenty small tanks which are to be abandoned or at least lowered, and three which are to be retained.

The Superintending Engineer's attention will be drawn to the provision for pipe sluices in the first reach which appear insufficient either in number or size for the area it is contemplated to irrigate. Another point requiring attention in the designs, both for this and other channels, is the excessive height of the steps in the foundations of wings of drops. This is always a dangerous system of construction where there is any appreciable head of water and when it is resorted to the steps should not exceed two or three feet and the excavation should be completely filled with masonry, with concrete by preference.

(Signed) W. HUGHES,
Chief Engineer for Irrigation.

23rd June 1898.

ORDER—No. 586 I., dated 29th July 1898.

The estimates referred to in the foregoing note by the Chief Engineer for Irrigation are sanctioned. The attention of the Superintending Engineer is directed to the remarks of the Chief Engineer for Irrigation regarding the sluices and drops.

2. This sanction is registered as No. 57 I. of 1898–99 and will expire on the 31st March 1900.

3. Ordered that a copy of these Proceedings be forwarded tc the Government of India for information.

[Here enter No. 587 I., dated 29th July 1898.]

(True Extract.)

(Signed) W. HUGHES,
Joint Secy. to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
„ Superintending Engineer, VI Circle, with enclosures.
„ Examiner, Public Works Accounts.

ENDORSEMENT—No. 587 I., dated 29th July 1898.

Forwarded.

(By order.)

(Signed) J. C. LARMINIE,
Ag. Joint Secy. to Government,
Irrigation Branch.

PUBLIC WORKS DEPARTMENT,

IRRIGATION BRANCH.

HE.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Estimate for excavating a distributary & field channels - Periyar Project

UNDER date the

READ the following

From Supg Eng, VI Circle, No 696 M D, d/ 13.5.98
From do - 657 M D, d/ 5.5.98
From do - 720 M D, d/ 18.5.98
Note by the Chief Engr for Irrigation - No 192 I d/ 23.6.98
No 5862 d/ 29.7.98

Issue 7.7.98 WH- I

168

The estimates referred to in the foregoing note by the Chief Engr for Irrigation are sanctioned.

2. This sanction is registered as No. 57 I of 1898-99 & will expire on the 31st March 1900.

3. Ordered that a copy of these Procs: be forwarded to the Govt of India for

The attention of the Supd Engr is invited to the remarks of the Chief Engr. for irrigation regarding the ~~...~~ sluices and drops —

Sanctioned A.S.H. 6.7.98

for information.
Endorsement No 587 d/ 29.7.98
Forwarded

[illegible]
2/7/98

W.H.
4.7.98

13/8/98

To
The Chief Engr for Irrigation
Supdg Engr, VI Circle for the Works.
Ex Engr P.W.

[illegible]
1/7/98

E. J. Form No. 1—500—1-11-97

Public Works (1898) Department.

CURRENT No. 5800.

From the Chief Engr for Irrgn

Order

No. 192 I

Dated 23-6-98

Received } 11.7.1898
Registered }

Enclosures ~~45~~ 82 (23 plans)

Spare copies

SUBJECT.

Periyar Distribution Estimates amounting to Rs 21410 connected with the - Note recom-mending for sanction certain -

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

No 192. I dt 23.6-98

14 P

Note by the Chief Engineer for Irrigation

9th Branch Channel. Revised estimate for Distributary from left sluice above Drop No. 14. . . . Rs 3,840
9th Branch Channel. Extending Pap-pagudi offtake . . . Rs. 8790 ~~8750~~
12th Branch Channel - Excavating Distributaries XI and XI A. . Rs 8780 ~~8770~~

The marginally noted estimates connected with the Periyar distribution are submitted for sanction

2. Of the area under the first of these works 218 acres of Government waste were sold for Rs 24,537. It was subsequently found that 41 acres which were sold for over Rs 100 an acre are not at present-command-ed and in order to command this land it is proposed to regrade the channel from 2200 feet where there is a 3 ft drop to 4000 feet where a 2 ft drop is to be constructed. This will necessitate raising the bank in this length. The bed will by degrees adjust itself to the altered surface fall. Another small drop is proposed at the tail end of the channel. The excess over the estimate sanctioned in G.O. No. 572 I, dated 23rd June 1897, will be Rs 750.

A.S.K.

+ Flag B.

3. The second estimate is for carrying the

Pappagudi

Pappagudi offtake of the 9th Branch Channel round a group of Inam tanks and extending it to supply 1500 acres (including present wet) of Government land. This land cannot now be irrigated until water has filled and surplused from the inam tanks. The channel will unfortunately be very expensive, nearly Rs 6 per acre irrigated.

The last estimate is for distributaries from the 12th Branch Channel to supply 1500 acres. Apparently much of this area is already irrigated from over 20 small tanks which are to be abandoned or at least lowered and 3 which are to be retained. The Superintending Engineer's attention will be drawn to the provision for pipe sluices in the first reach which appear insufficient either in number or size for the area it is contemplated to irrigate. Another point requiring attention in the designs both for this and other channels is the excessive height of the steps in the foundations of wings of drops. This is always a dangerous system of construction where there is any appreciable head of water and when it is resorted to the steps

should not exceed two or three feet and the excavation should be completely filled with masonry, with concrete by preference

W. Hughes

Chief Engineer for Irrigation

To.

The Joint Secretary to Government
P. W. D. Irrigation Branch

50

These estimates should have been returned. They must be treated as urgent

1/10

23/6

1. 9th Branch Channel. Revised Est. for Distributary from left sluice above Drop No 14 — Rs ~~3840~~

2. 9th Branch Channel. Extending Pappaguri offtake Rs ~~8750~~ 8790.

3. 10th Branch Channel. Cross Drainage work in Chennur offtake — Rs 3570

4. 12th Branch Channel. Secondary Distributaries X1 and X1A — Rs ~~8770~~ 8780

Note by the Chief Engr for Irrigation

The marginally noted estimates connected with the Penyru distributaries are submitted for sanction.

~~with regard to the~~

2. Of the area under the first of these works 218 acres of Govt. waste were sold for Rs 24537. It was subsequently found that 41 acres which were sold for over Rs 100 an acre are not at present commanded and in order to command this land it is proposed to regrade the channel from 2200 ft where there is a 3 ft drop to 4000 ft where a 2 ft drop is to be constructed. The regrading ~~will be effected~~ will necessitate raising the bank in this length. The bed will by degrees adjust itself to the altered surface fall. Another small drop is proposed at the tail end of the channel. The saving on the estimate sanctioned in G.O. No 572 I of 23 June 1887 will be Rs 750.

3. The second estimate is for carrying the Pappaguri offtake of the 9th Branch channel round a proposed

1500 acres (including present well) of Government land. This land cannot now be irrigated until water has filled and surplused from the main tanks. The channel will unfortunately be very expensive, nearly Rs 6 per acre irrigated.

4. The third estimate is for works which should have been provided for in the estimate for the 10th Branch channel.

4 5. The last estimate is for distributaries from the 12th Branch channel to supply 1500 acres. Apparently much of this area is already irrigated from over 20 small tanks which are to be abandoned or at least lowered and 3 which are to be retained. The Supd Engineer's attention will be drawn to the provision for pipe sluices in the first reach which appear insufficient either in number or size for the area it is contemplated to irrigate. Another point requiring attention in the designs both of this and other channels is the excessive height of the steps in the formation of tanks of drops. This is always a dangerous system of construction where there is any appreciable head of water and when it is resorted to the ~~[illegible]~~ steps should not exceed two or three feet and the [illegible] should be completely

filled with masonry, or concrete by preference

23.6.95 JM

Public Works (1898) Department.

CURRENT No. 48 ...

Order

EI

May then be sanct^d after check

JB
22/6

MEI

The estimates have been checked, & increased from Rs 8770 to Rs 8,780, owing to raising the side walls of the tail drops by 6" vide EIs remarks on plan of tail drop

[illegible]
30/VI/98

[illegible]
30-6-98

From

The Supg Engineer
VI. Circ...

No. 720. L.D.

Dated 18th May 1898

Received 21 — Do —

Enclosures 19. (10 plans

Spare copies

SUBJECT.

XI. & XI.A. Distributa...
of 12th Branch Chan...
Forwards for sanc...
an Est. of Rs 8770 fo...
Excavating the — a...
masonry works.

EE to check the
estimates

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

No. 720. L. D.

OFFICE OF THE SUPERINTENDING ENGINEER,

6TH CIRCLE,

Kodaikanal ~~Trichinopoly~~, 18th May 1898.

D/20.

From

Lt. Col. C. V. Boddy, R.E.
Superintending Engineer,
6th Circle.

10 P

To

The Chief Engineer,
for Irrigation

SIR,

19. ENCLOSURES.

1 Survey.
3. Sheets Longl. Section
1. Plan of Masonry Works
7 Individual Estes
1. Gl. Este with report
1 Mileage statement
1 classified abstract

+ Increased to Rs 8780 in the office of the Chief Engr. for Irrigation, provision having been made for raising the side walls of the tail drops by 6".

I have the honor to forward for your approval and sanction an estimate amounting to Rs 8,770 for excavating XI & XI A Distributary of 12 Branch Channel and constructing the necessary masonry works.

2. The Head sluice is situated at the 10 mile of the 12 Branch Channel. The length of the distributary Channel is 4 miles and ~~4280~~ 4180 ft, of which 3 m. and ~~2460~~ 2560 ft. will be maintained by Government.

3. A survey showing the course of these distributaries, accompanies the estimate, also a statement to indicate the position of the masonry works and in which the hydraulic details of these Channels are given.

4. The area to be commanded by the channels is 1,500 acres and the increase of revenue expected is roughly Rs 7,500 at Rs 5 an acre. The works are classed as remunerative and the probable date of completion of the works will be 31 March 1899.

5. The rates have been revised by the Executive Engineer and are considered fair; the estimate is recommended for sanction.

I have the honor to be
Sir,
Your Most obed't Servant,

O. J. Bodley Lt.Col. R.E.
Supg Engineer, VI Circle

CHIEF ENGINEER
FOR IRRIGATION.
21 MAY 1898
No. 48 In 2

I. W. 249
5801/98

14/5/98

CE1
1075/28.

Public Works (1898) Department.

M.D

CURRENT No. 44

Order

E1
may this be sanctd
after check.

[illegible] 22/5/98

[illegible]

The estimates have been checked, and increased from Rs 8750 to Rs 8790, owing to provision having been made for revetting the slopes of the channel at the Pipe culvert. vide E1's remarks on the plan.

[illegible]
29/VI/98

[illegible]
29-6-98

From
The Supg Engineer
VI. Circle

No. 657. L.D.

Dated 5th May 1898.

Received

Enclosures 2 (Sent separately)

Spare copies x (10 plans)

SUBJECT.

Tailend of Pappagudi Offtake. Forwards for sanction an Estimate of Rs 8750 for excavating the — branching from the 9th Branch Channel

To CE1 to check the estimate

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

ESTIMATE FORM—ABSTRACT—CLASSIFIED.

Sub-head.	Names of Works.	Amount of Estimate for individual Work.	Total of Sub-heads.	Total for each Canal or Distributary.	Total of each main head.	REMARKS.
1	2	3	4	5	6	7
	Capital Expenditure not charged to Revenue					3
	49 Irrigation					
	Periyar Project					
	Open Capital account					
	3. Distributaries					
	9th Branch Channel					
	Remunerative works					
	Excavating distributary & field channels from left sluice above drop No 14.					
	Revised Estimate.					
2. Land	1. Compensation for land	138				
			138			
3. Works	2. Constructing 9" pipe sluice at 300 feet	90				
	3 Do Do at 2280 ft	50				
	4 Do 3 feet drop at 2300 feet	150				
	5 Do Melur road culvert at 2500 feet	370				
	6 Do Two masonry sluices at 2000 ft & 5300 ft Each 56 Rs.	112				
	7 Do Four 6" earthenware pipe sluices	120				
	8 Do 6 feet drop at 5300 feet	390				
	Carried over	1282	138			

STATION
Dated 188 }

Executive Engineer.

P. W. D. Madras.
Form No. M. 7 g.

REFERENCE TO MADRAS P. W. D. CODE,

CHAPTER VII—PARAS 968 & 968 A.

ESTIMATE FORM—ABSTRACT CLASSIFIED.

IRRIGATION.

______________ CIRCLE.

DIVISION—

DISTRICT—

To accompany the Detailed Estimate No.

of 188 -8 , for *

* Here enter the Name and Description of work in full.

ESTIMATE FORM—ABSTRACT—CLASSIFIED.

Sub-head.	Names of Works.	Amount of Estimate for individual Work.	Total of Sub-heads.	Total for each Canal or Distributary.	Total of each main head.	REMARKS.
1	2	3	4	5	6	7
	Brought forward	1282	138		Sanctioned in G O No: 5868 I 27-7-98	& registered as No: 57 I of 1898-99
	9- Constructing - Two 2 feet drops at 4000 ft and tail end each Rs- 110	220				
			1502			
4- Earthwork	-10- Earthwork cutting distributary	2180				
			2180			
5- Miscellaneous	-11- Demarcation stones	20				
			20			
	Total ~~Rupees~~ Works			3840		
	II Establishment			851		
	III Tools & Plant			9		
	Total Estimate			4700		

O V Bosley Lt Coll R.E.
Superintending Engineer
6th Circle
13-5-98

STATION }
Dated 188 . }

Executive Engineer.

P. W. D. Madras.
Form No. M. 77 y.

REFERENCE TO MADRAS P. W. D. CODE.

CHAPTER VII—PARAS 968 & 968A.

ESTIMATE FORM—ABSTRACT CLASSIFIED.

IRRIGATION.

Sixth- CIRCLE.

DIVISION— Madura

DISTRICT— Madura

To accompany the Detailed Estimate No.

of 188 -8 . for * Excavating distributary and field channels from left sluice above drop No 14 - 9th Branch Channel

Revised Estimate

* Here enter the Name and Description of work in full.

I.W.E.2
5801/98

CHIEF ENGINEER
IRRIGATION
17 MAY. 1898
47 M.D
2

Enclo No 5 to S. E. 6" No 696. L.D. / 13-5-98

ESTIMATE FORM—Abstract—Classified.

Sub-head.	Names of Works.	Amount of Estimate for individual Work.	Total of Sub-heads.	Total for each Canal or Distributary.	Total of each main head.	Remarks.
1	2	3	4	5	6	7
	Capital Expenditure not charged to Revenue					
	49 Irrigation works					
	Peruyda project					
	Open Capital Account					
	~~1- Work~~					
	3- Distributaries					
	9th Branch channel					
	Remunerative work					
	Excavating the tail end of Pappagudi offtake & constructing (masonry) works in the same					
2-	Land + Compensation for land	829				
			829			
3-Works	2- Drop of 4 ft at $\frac{0}{1100}$	400				
	3- Do Do at $\frac{1}{220}$	400				
	4- Do of 6 ft at $\frac{1}{620}$	480				
	5- Two 12" pipe culverts at $\frac{0}{2100}$ + $\frac{0}{3700}$ each 100 Rs	~~200~~ 240				
	6 - Three - 10 feet Cross drainage weir each Rs. 80	240				
	7- Two 20 ft Cross drainage weir Rs. 115 each	230				
	8- Two Masonry Sluice 1½ x 1½ Rs. 95 each	190				
	Carried over	~~2140~~ 2180	829			

STATION }

Dated 188 . }

Executive Engineer.

P. W. D. Madras.
Form No. M. 77 g.

REFERENCE TO MADRAS P. W. D. CODE.

CHAPTER VII—PARAS 968 & 968 A.

ESTIMATE FORM—ABSTRACT CLASSIFIED.

IRRIGATION.

______________ CIRCLE.

DIVISION—

DISTRICT—

To accompany the Detailed Estimate No.

of 188 -8 . for *

* Here enter the Name and Description of work in full.

Sub-head.	Names of Works.	Amount of Estimate for individual Work.	Total of Sub-heads.	Total for each Canal or Distributary.	Total of each main head.	REMARKS.
1	2	3	4	5	6	7
	Brought forward	~~2140~~ 2180	829			9
3-Works Continued	9- Two-9" pipe Sluices Rs. 70 each	140				
	10- Ten-6" pipe Sluices Rs. 45 each	450				
	11- 2 feet Tail Drop	140				
			~~2870~~ 2910			
4-Earth work	12- Excavating tail channel & Distributaries	4989				
			4989			
5 Miscellaneous	13- Demarcation Stones	62				
			62			
	Total ~~Rupees~~ I Works			~~8750~~ 8790		
	II Establishment			1831		
	III Tools & Plant			9		
	Total Estimate			10630		

Sanctioned in G.O. No. 586 I D of 29-7-98 & registered as No. 57 I of 1898-99

O. V. Bodley Lt Col R.E.
Supg Engineer 6th Circle
5-5-98

STATION

Dated 188 } Sd/ 24/11

Executive Engineer.

REFERENCE TO MADRAS P. W. D. CODE,

CHAPTER VII—PARAS 968 & 968 A.

P. W. D. Madras.
Form No. M. 77 g.

ESTIMATE FORM—ABSTRACT CLASSIFIED.

IRRIGATION.

6th CIRCLE.

DIVISION— Madura

DISTRICT— Madura

To accompany the Detailed Estimate No.

of 188 -8 . for * Excavating the tail end of Pappagudi offtake and constructing masonry works in the same - 9 Branch Channel ; 87907.

* Here enter the Name and Description of work in full.

CHIEF ENGINEER FOR IRRIGATION
10 MAY. 1898
No. 44 I.D / 2

P.O.C. 19
5 Nov / 98

Enclosure 5 to S.E. 6 No. 657 I.D / 5-5-98

Sub-head.	Names of Works.	Amount of Estimate for individual Work.	Total of Sub-heads.	Total for each Canal or Distributary.	Total of each main head.	Remarks.
1	2	3	4	5	6	7
	Capital Expenditure not Charged to Revenue					12
	49 Irrigation Works					
	Periyar Project					
	Open Capital Account					
	~~1. Work~~					
	3. Distributaries					
	XI Distributary at 10 mile XII Branch Channel					
	Remunerative works					
	Excavating XI and XI A Distributary from 10th miles 12th Branch Channel					
2. Land	& Compensation for land	677				
			677			
3. Works	2. Head Sluice XI Distry at 10th M. 12. B. Channel	380				
	3. Five 6 feet falls in the XI Distributary each Rs. 470	2350				
	4. one 6 feet fall small in the XI A Distry	435				
	5. Two tail Drops each Rs. ~~65~~ 70	~~130~~ 140				
	6. Dividing dam at 139 chain XI Distry	200				
	Carried over	3565 ~~3495~~ 3505	677			

P. W. D. Madras.
Form No. M. 77 g.

Reference to Madras P. W. D. Code.

Chapter VII—Paras 968 & 968 A.

ESTIMATE FORM—Abstract Classified.

IRRIGATION.

Circle.

Division—

District—

To accompany the Detailed Estimate No.

of 188 -8 . for *

* Here enter the Name and Description of work in full.

Sub-head.	Names of Works.	Amount of Estimate for individual Work.	Total of Sub-heads.	Total for each Canal or Distributary.	Total of each main head.	REMARKS.
1	2	3	4	5	6	7
	Brought forward	~~3495~~ 3505	677			Sanctioned in G.O. No. 586 I.D. 27-7-98 & registered as No. 57 I.D. of 1898-99
	7- Twelve Inches pipe sluice in 11 & 11A Distry each Rs. 55	660				
	8- Two 9" pipe sluice in the XI Distributary each Rs. 75	150				
			~~4305~~ 4315			
4. Earthwork	9- Excavating 11th & 11th A Distributaries	3746				
			3746			
5. Miscellaneous	10- Demarkation Stones	42				
			42			
	Total Tw'ks Bennett			8780 ~~8770~~ 8,780		
	II Establishment			1864		
	III Tools & Plant			6		
	Total Estimate			10650		

O. V. Bodle Lt. Col. R.E.
Supdg. Engineer 6th Circle
18-5-98

P. W. D. Madras.
Form ... M. 77 g.

REFERENCE TO MADRAS P. W. D. CODE,

CHAPTER VII—PARAS 968 & 968 A.

ESTIMATE FORM—ABSTRACT CLASSIFIED.

IRRIGATION.

6th CIRCLE.

DIVISION— Madura

DISTRICT— Madura

To accompany the Detailed Estimate No.

of 188 -8 . for * XI & XIA Distributary from 10th miles in 12th Branch channel—Excavating the.

* Here enter the Name and Description of work in full.

P.O. 250
5000/98

CHIEF ENGINEER
FOR IRRIGATION
21 MAY. 1898

48 Irr D
19

Enclosure 19 to S. E. 6th No. 720. Irr D / 18-5-98

No. 98 L dated 2nd November 1897

Report to accompany the Estimate for Excavating XI & XI A Distributary 12th Branch Chl. —

11 S. P.

Amount of Estimate Rs: ~~8120~~ ~~8770~~ 8780

SUPG. ENGINEER'S OFFICE.
No. 1708
8 NOV. 1897
P.W.D.
SIXTH CIRCLE.

The channel takes off at 10 miles of the 12th Branch channel & is intended to irrigate about 1500 acres besides filling in the tanks, Sattan Endal, Siliandaikudi kammoy & Arangudi Endal, proposed to be maintained.

Enclosures
1 Gl. Est.
7 Detailed Estes.
10 Tracings
18

At 139th chain where the distributary bifurcates, there will be a dividing dam to regulate the water. One of these is XI A. Distributary irrigating 600 acres. Part of the banking of this Branch distributary will be formed from the spoil earth available from the side drainage chl. (vide Survey plan accompanying) to pass the drains of Sinnapanian Endal through which it runs.

Necessary drops and Sluices are provided in the Estimate.

The

works will be carried out in accordance with the Standard Specification current in the department.

A Joyce
Executive Engineer
Special Roads[?]

2/11/97

S.G.
H.D.

P.W. 5 52
5400/98

Report to accompany the estimate for excavating the tail end of Pappagudi offtake and constructing masonry works in the same.

Encl to — 10 tracings
9 Est. detail
9 abstract
1 Calculation note
4 Statements
1 Gl. abstract
24

Amount of Estimate Rs ~~8750~~ 8790

ayacut 800 acres

Tanks Commanded & to be maintained.
1. Elamanur Peria Kanoi no 203.
2. Kolikudi Peria Kanoi no 203
3. Pattappanaiyan Kanoi no 212
4. Elampallam tank (not in G-O as it was then thought it could not be easily commanded)

Tanks to be abandoned.
1. Ponnangulam not in G.O.
2. Elamanur Pudu no 214 Kanmoyi
3. Kolikudi Pudu Kanmoyi 209.
4. Andi odaikulam no 210
5. Achangulam
6. Kurunjapallam Kanoi
7. Sattamuttu
not in G.O

Length of Chl 4 miles 3380 ft
Length maintained 3 miles 4260 ft

Pappagudi offtake at present ends in an Inam tank (Poolangulam tank) and consequently the Government tanks lower down could not be supplied with Periar water except through a group of Inam tanks.

It is therefore proposed to continue the tail end of the offtake along the line shown in the accompanying survey plan and construct the necessary masonry works for irrigating the Government dry lands and the mamool wet lands.

This Chl. will be maintained up to 201" chain.

The work will be carried out in accordance with the Standard Specification current in the Dept.

T. W. Stumpth(?)
Executive Engineer
Periar Divn.(?)

23/3/98.

P.W.S.13
5800/88

Report to accompany the revised Estimate for excavating Distributary & field Chls from the left Sluice of drop No 14 - 9 Br. Chl.

U.P.G. ENGINEER'S OFFICE, No. 1110 18 MAR 1898 P.W.D. SIXTH CIRCLE.

Amount of revised Este 3840.
" original Este — 3090.
Excess — Rs 750

Enclo 1 Este
3 tracings
4.

The revised estimate provides for building a 2 feet drop at the 6th furlong and raising the banks for a length of 2 furlongs above.

The lands between the 6th & 8th Furlong were Government waste lands now sold and it is found impossible to irrigate them under existing conditions.

The area not at present commanded is 41 acres and was sold for over 100 ~~Rs~~ per acre, the total area of 218 acres bringing Rs 24,537

The income to be derived from the interest on this sum and water tax will be nearly ~~Rs~~ 500. So the extra work is well worth doing.

A 2 feet tail drop of the same design is also provided.

T W Smyth
15/3/98. Executive Engineer

P.W.E.3
5801/98

No. 657. Ir. D.

OFFICE OF THE SUPERINTENDING ENGINEER,
6TH CIRCLE,

Kodaikanal ~~Trichinopoly~~, 5th May 1898.

From

Lt.Col. C. V. Boddy D.? R.E.
~~The~~ Sperintending Engineer,
6th Circle.

5 P

To

The Chief Engineer,
for Irrigation

SIR,

× 21 · ENCLOSURES.

1. Survey.
2. Sheets of L. Sections
1. Est. Estimate with report &c
1. classified abstract
7. masonry plans
8. detailed Estimates.
1. Earthwork Estimate
21

× Sent Separately

+ Round [illegible]
Increased to Rs 8790 in the office of the Chief Engr for Irrigation owing to provision having been made for revetting the slopes of the channel at the pipe culvert.

I have the honor to forward for your approval and sanction an estimate amounting to Rs 8750 for excavating the tail end of Pappagudi offtake branching from the 9th Branch Channel, and constructing the necessary masonry works in the same.

2. The offtake at present ends in an Inam tank and in order to supply Government lands without the intervention of Inam lands, the extension now estimated for is proposed. For purposes of irrigation ten pipe sluices of 6 inches diameter, two of 9 inches diameter and two masonry sluices having vents of 1½ feet square are provided.

3. The two 12 inch culverts are proposed to prevent the banks from becoming

200—20-4-98

ater logged and the lands from being
kept under submergence. The quantity
f drainage to be disposed of is
ery small.

Five Bywashes which are spaced
over a length of 1½ miles are designed
t carry the drainage of ⅕ of a square
mile which is considered a sufficient
provision.

5. A Considerable portion of the
Channel, vide longitudinal section,
is in heavy embankment but this
is quite unavoidable.

6. Where the line of Channel
crosses the road or Cart tracks, the
banks will be sloped with a gradient
of 1 in 5 and bridges are not Consi-
dered to be necessary. The mileages
of all these works are shown in the
accompanying tabular statement
which shows hydraulic information
in addition.

7. The work is classed as remu-
nerative and the expected return
on the whole ayacut which is 1500
acres, is estimated to £ 7,500 at £ 5

per acre.

8. The Executive Engineer reports that the quarries are near the line and the rates provided are therefore sufficient.

9. The estimate is recommended for sanction.

I have the honor to be
Sir,
Your most obedt. Servant,

J. V. Hoddley Lt. Col. R.E.
Supg. Engineer, III Circle

8/5/98

P. W. D. 6th CIRCLE.

FROM
THE SUPERINTENDING ENGINEER,
6TH CIRCLE.

TO
THE CHIEF ENGINEER,

NO.

Dated. }
Received. } 189 .

Enclosure.

CHIEF ENGINEER
FOR IRRIGATION.
10 MAY. 1898
No. 44

P.W.S. 12
5800/98

17/5/98.

Public Works (1898) Department.

CURRENT No. 47 Ir. D.

Order

E.I.

May this be sanct. after check.

22/6

E.E.

The estimate has been checked

29/6/98

29-6-98.

From

The Supg Engineer. VI. Circle

No. 696. I. D.

Dated 13th May 1898.

Received 17th — Do —

Enclosures Est. (× 3 plans)

Spare copies

SUBJECT.

Distributary & Field Channels. Forwards for sanction a revised estimate of Rs 384 for excavating — from the left sluice above Drop No 14. in the IX. Branch Channel Periyar Project.

To C.E. to check the revised estimate

BACK PAPERS.

No.	Date.
R 3799 d/	8 7/98 ✓

FURTHER PAPERS.

No.	Date.

No. 696. Ir. D.

OFFICE OF THE SUPERINTENDING ENGINEER,
6TH CIRCLE,
Kodaikanal ~~Trichinopoly~~ 13th May 1898.
D/16

From
Lt. Col. A. V. Boddy R.E.
Superintending Engineer,
6th Circle.

To
The Chief Engineer,
for Irrigation.

SIR,

5 ENCLOSURES.
1. Estimate with report &c complete
1. Longl. Section
1 Site Survey
1 Type plan of 2ft drop
1 classified abstract
E

I have the honor to forward for your approval and sanction a revised estimate amounting to Rs 3,840 for excavating distributary & field channels from the left sluice above Drop No: 14 in the 9' Branch Channel.

2. The estimate is submitted in supersession of that for Rs 3,090 sanctioned in G.O. No: 572 I dated 23 June 1897 & the excess amount now requiring sanction is Rs 750. The necessity for the estimate is explained in the report attached to the estimate. It is reported that Govt. waste lands to the extent of 41 acres lying between 6° & 8° furlongs cannot be irrigated under the existing arrangements. It is therefore proposed to raise the water level sufficiently by the introduction

a 2' drop in the 6th furlong making the bed level of the reach above this drop level. The channel below this drop will remain as originally designed that is, with a fall of 1 in 1000. At the tail end another 2 feet drop is now proposed. To make provision for these additional works the original estimate has been revised and for the reasons given in the report, the Executive Engineer's proposal is approved and the estimate recommended for sanction.

I have the honor to be
Sir,
Your Most obedt. Servant.

[illegible] Lt Col. R.E.
Superintending Engineer
[illegible] Circle

CHIEF ENGINEER FOR IRRIGATION
17 MAY. 1898
No. 479 [illegible]

D.W.S.1
5 Nov/98

[illegible] 17/5/98